

Introduction

The ImmPort system supports the National Institute of Allergy and Infectious Diseases (NIAID) and Division of Allergy, Immunology, and Transplantation (DAIT) mandate to facilitate storage, sharing and analysis of research data.

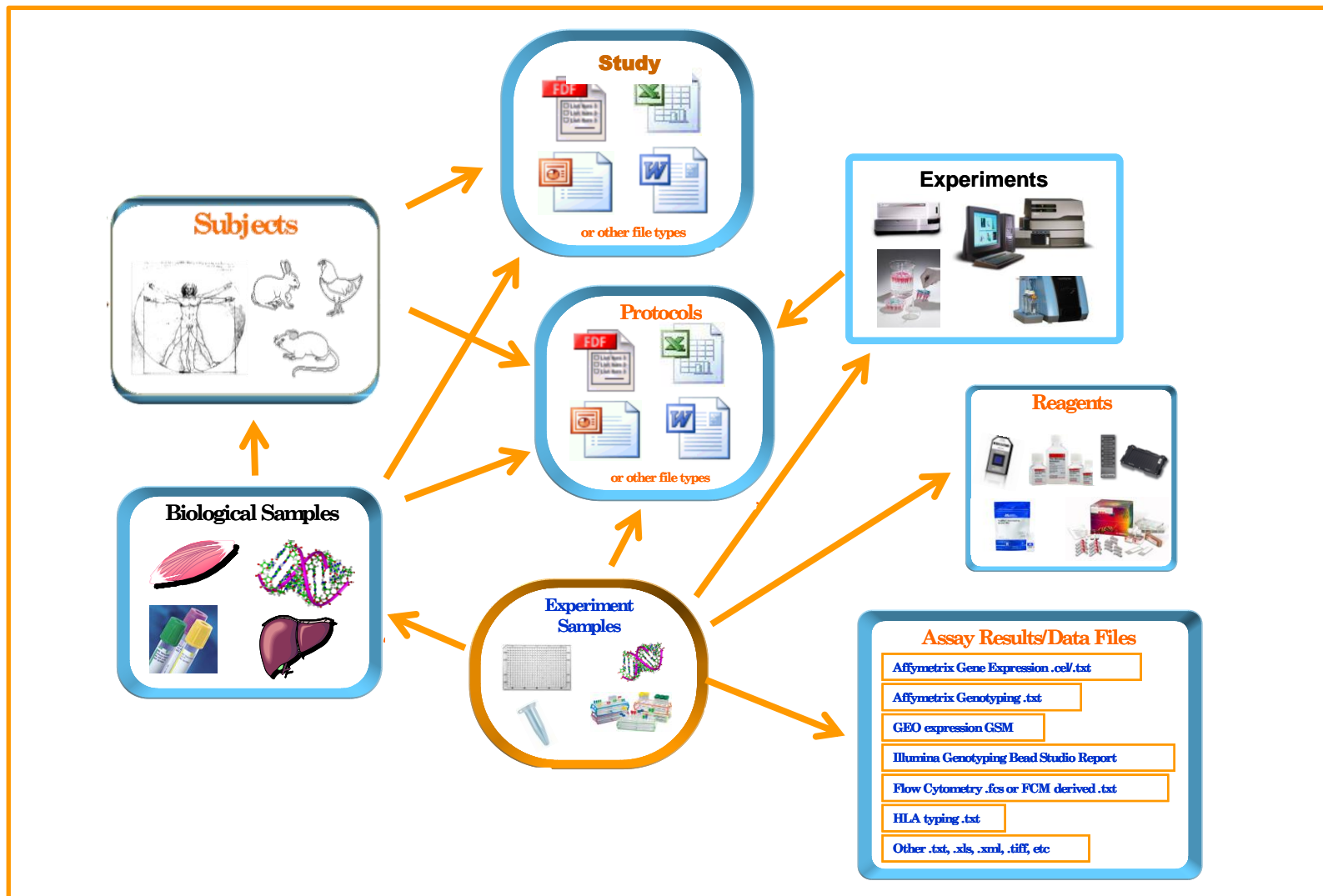
This tutorial is intended as an introduction to the ImmPort data submission process. It is meant to supplement, but not replace interaction with the ImmPort staff. Contact the ImmPort staff for the preparation of the data for submission and using the analytical tools at helpdesk@import.org.

Data Submission allows you to upload descriptive information about Studies, Subjects, Samples, Experiments, Protocols, Reagents, and Results. An ImmPort data submission package may include a complete data set or incremental data sets. The packages are transferred by secure ftp to the ImmPort system. The contents of the package are processed to store the results and make them available for the analysis, query and sharing tools of ImmPort.

A Research Project generally refers to a private workspace to be used by an individual or by a group researchers collaborating on a given project. The workspace provides access control to studies, experiments, results, and any accompanying data. If you need assistance in understanding what a Research Project is and whether you are associated with one, please contact the Help Desk.

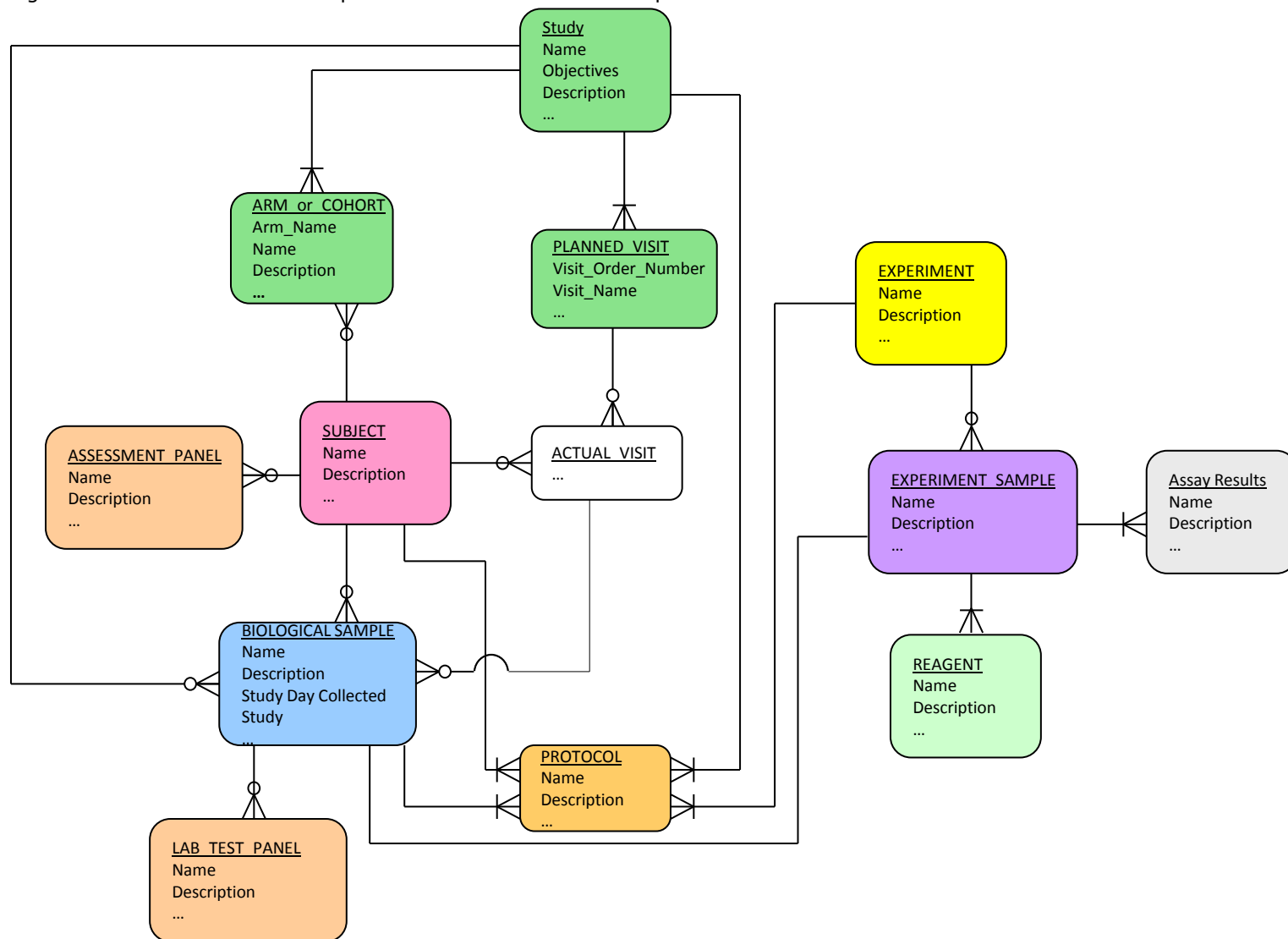
The ImmPort Data Model

This diagram illustrates the relationships between research data components.



Another View of the ImmPort Data Model

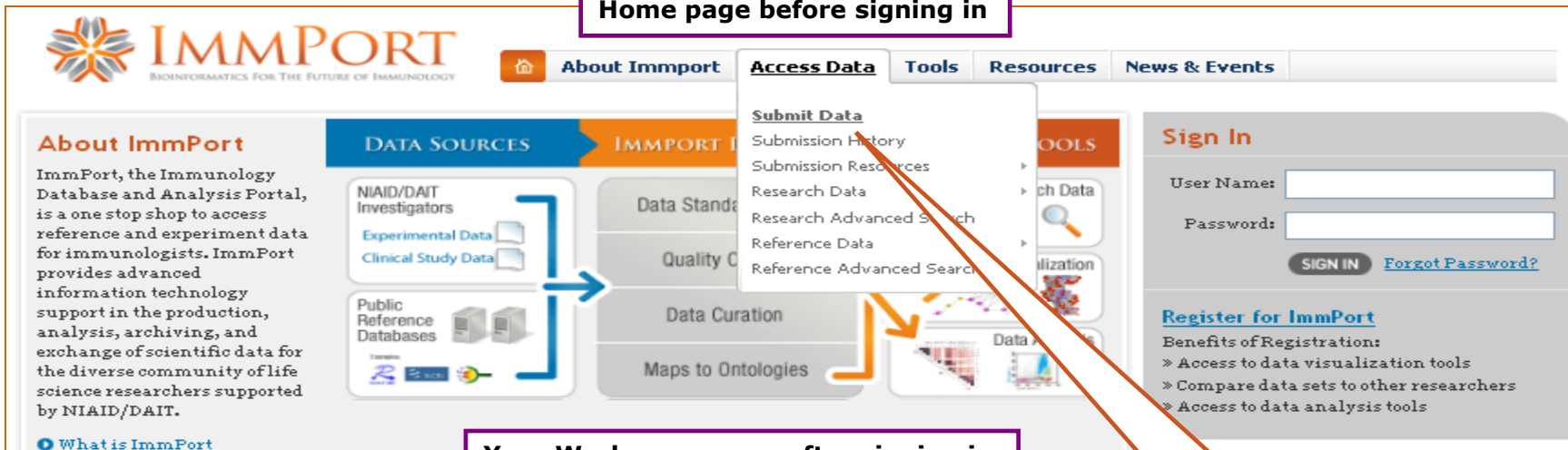
This diagram illustrates the relationships between research data components with more details



Data Submission

The Data Submission main page is accessed by clicking on the "Submit Data" link from the menu bar either before or after signing in.

Home page before signing in



About ImmPort
ImmPort, the Immunology Database and Analysis Portal, is a one stop shop to access reference and experiment data for immunologists. ImmPort provides advanced information technology support in the production, analysis, archiving, and exchange of scientific data for the diverse community of life science researchers supported by NIAID/DAIT.

DATA SOURCES
NIAID/DAIT Investigators
Experimental Data
Clinical Study Data
Public Reference Databases

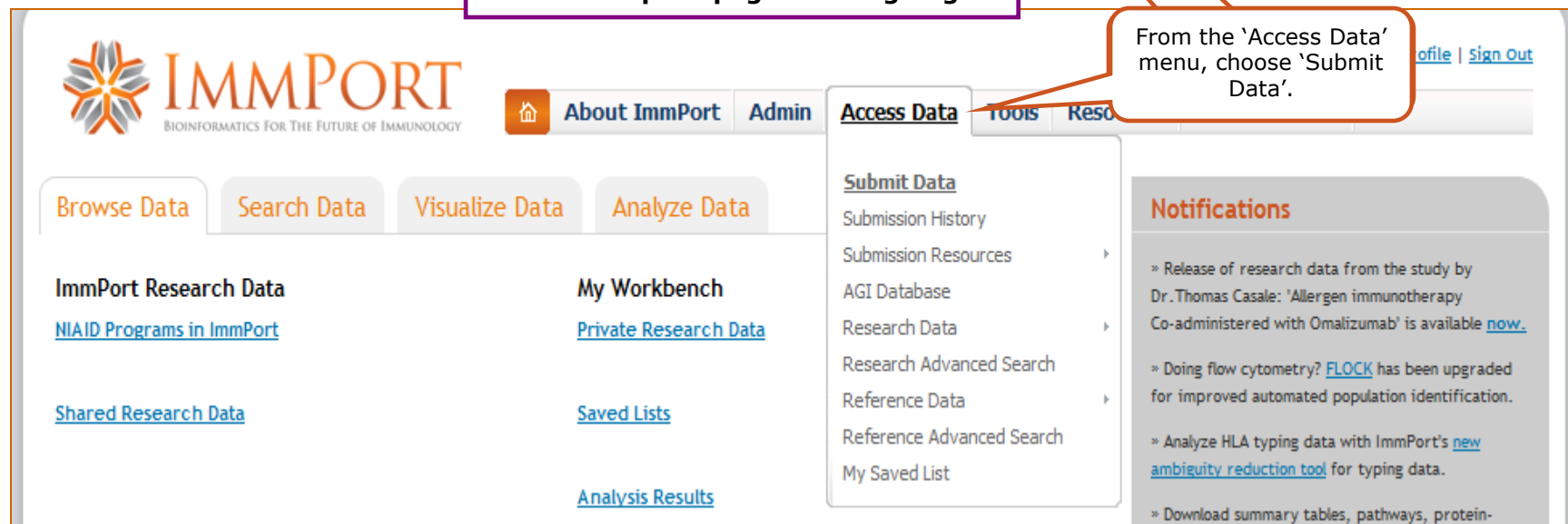
IMMPORT I
Data Standard
Quality Control
Data Curation
Maps to Ontologies

Access Data
Submit Data
Submission History
Submission Resources
Research Data
Research Advanced Search
Reference Data
Reference Advanced Search

Sign In
User Name:
Password:
SIGN IN [Forgot Password?](#)

Register for ImmPort
Benefits of Registration:
» Access to data visualization tools
» Compare data sets to other researchers
» Access to data analysis tools

Your Workspace page after signing in



IMMPORT
BIOINFORMATICS FOR THE FUTURE OF IMMUNOLOGY

Access Data
Submit Data
Submission History
Submission Resources
AGI Database
Research Data
Research Advanced Search
Reference Data
Reference Advanced Search
My Saved List

Notifications
» Release of research data from the study by Dr. Thomas Casale: 'Allergen immunotherapy Co-administered with Omalizumab' is available [now.](#)
» Doing flow cytometry? [FLOCK](#) has been upgraded for improved automated population identification.
» Analyze HLA typing data with ImmPort's [new ambiguity reduction tool](#) for typing data.
» Download summary tables, pathways, protein-

From the 'Access Data' menu, choose 'Submit Data'.



Data Submission Main Page.

Data Submission / Data Submission Home
Submit Data | Submission History | Resources ▾

Work Flow Guide and Status Bar

Welcome to the ImmPort Experiment Data Submission Main Page!

[Submit Data Main Page](#) → [Step 1: Download and Fill Templates](#) → [Step 2: Check Data in .zip file](#) → [Step 3: Send Data in .zip file](#) → [Step 4: Review Submission Status & Results](#)

The Experiment Data Submission module allows users to upload experiment data into the ImmPort DATABASE. Information about the experiment and its results are organized into several components including Subjects, Biological Samples, Experiment Samples, Protocols, Reagents, and Experiment Sample Results.

If this is your first time entering data, you will need the following:

- ▶ A set of protocol documents delineating your SOPs
- ▶ Reagent list
- ▶ A list of types of samples (blood vs lymphocytes vs serum, etc.)
- ▶ A system for uniquely defining each sample such that sample type, date of sample, type of analysis can be discerned

Please check that you are using the latest version of the ImmPort data transfer templates.

- ▶ [Data Submission Template Change History](#)
- ▶ [User Guide](#)
- ▶ [Tutorial](#)
- ▶ [Example Data Packages](#)
- ▶ [Data Package Validator](#)
 - ▶ This tool checks the format and content of the files in the data package and reports issues.
 - ▶ The tool is downloadable client side and executed from a graphical user interface.



Data Submission / Resource / Data Submission Templates

Help resources

[Submit Data](#) | [Submission History](#)

Resources ▾

[Tutorial](#)

[User Guide](#)

[FAQs](#)

[Templates to Download](#)

[Template Change History](#)

[XML Resources](#)

[Example Data Packages](#)

[Link to JRE](#)

[Step 2:](#)

[Check Data in .zip file](#)

[Step 3:](#)

[Send Data in .zip file](#)

[Step 4:](#)

[Review Submission Status
& Results](#)

1. Which Data Submission Templates

Please contact us by email at [help](#)

The [User Guide](#) is a reference y

2. Complete the templates that are needed.

Note: Please save spreadsheet .xls templates as tab delimited .txt files.

3. Create a .zip file that contains the files you want to submit (e.g. results, protocols, bioSamples template, experimentSamples template, etc.).

4. Please check that you are using the [latest version](#) of the ImmPort data transfer templates.

ImmPort Research Data Class	Purpose	Spreadsheet Template	Required Data to Complete Metadata Form	XML Template	Latest Version/ Date Available
Basic Study	Describes a study in terms of title, goals, endpoints, subject grouping (arms or cohorts), personel, planned visits or encounters and protocols using a single worksheet. A study design should be uploaded first.	basic_study_design.xls	<ul style="list-style-type: none">▶ Study User Defined ID▶ Title, Description, Endpoints, Arms or Cohorst, Personnel, Period. Planned Visit.		March 2012



Metadata Transfer Templates

Step 1: Download and Complete Templates. The descriptive information about research data is captured in metadata transfer file templates. There are two formats provided on this site for the metadata templates: spreadsheet based and XML (eXtensible Markup Language) based. Both formats capture equivalent descriptive information.

There are 7 categories of metadata transfer templates
basic study design - Describe the purpose and goals of the research.

protocols.xls – CRFs, sample preparation, assay procedures

reagents.xls – Key components of assay (e.g. fluorochrome conjugated antibody)

subjectsHuman.xls – Human subjects information including demographics and phenotype

subjectsAnimal.xls – Non-human research subjects descriptions including strain and phenotype


experiments.xls – Describe experiments, including the hypothesis and experimental variables

bioSamples.xls – Samples extracted and processed from subjects (e.g. blood, DNA) and applied treatments

experimentSamples.xls – samples, reagents, and results form an assay. Note that there are templates tailored for assay types.

There are additional templates to describe HLA and KIR typing systems

Derived or interpreted assay results are reported in a assay specific for ELISA, ELISPOT, Flow Cytometry, HAI, HLA, KIR, Virus Neutralization results.



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Data Submission / Resource / Data Submission Templates

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[Submit Data Main Page](#)

**Step 1:
Download and Fill Templates**

[Step 2:
Check Data in .zip file](#)

[Step 3:
Send Data in .zip file](#)

[Step 4:
Review Submission Status & Results](#)

- Which Data Submission Templates do you need?
Please see the [User Guide](#) to determine which, if any templates need to be completed.
- Complete the templates that are needed.
Note: Please save spreadsheet .xls templates as tab delimited .txt files.
- Create a .zip file that contains the files you want to submit (e.g. results, protocols, bioSamples template, experimentSamples template, etc.).
- Please check that you are using the [latest version](#) of the ImmPort data transfer templates.

ImmPort Research Data Class	Spreadsheet Template	Required Fields Checklist	XML Template	Latest Version/ Date Available
Protocols	protocols.xls	Protocol User Defined Id	protocols.xml	09/08/2008
Reagents	reagents.xls	Reagent User Defined Id	reagents.xml	09/08/2008
Subjects	subjectsHuman.xls subjectsAnimal.xls	Human <ul style="list-style-type: none">User Defined IdProtocol	subjects.xml	09/08/2008



Data Submission Frequently Asked Questions

- **Which templates do I need?**
A complete data submission package will include all of the completed templates and result files. Incremental data submission packages will include some of the completed templates and perhaps results.
- **Why are there so many templates?**
ImmPort organizes descriptive information about research studies by commonly used domains or classes; studies, subjects, samples, protocols, experiments. The upload templates provides a means to capture relevant descriptive information about each data class and to link records from different data classes together.
- **Which templates should I complete first?**
The protocol and reagent templates are good candidates to complete first as these are often available to the researcher at the beginning of a study and protocols and reagents can be referenced by other descriptive data types. Subjects and Biological Samples could be completed next when this data becomes available. Experiments and the samples associated with experiments
- **What sort of protocols should I describe?**
Among the types of protocols to consider including in your data submission package are subject recruitment and evaluation forms, CRFs (Clinical Report Forms), sample extraction and treatment protocols and assay procedures.
- **Should I use Spreadsheet based or XML?**
Both template formats capture equivalent data. Spreadsheets may be more intuitive to bench scientists and XML may be more applicable for informaticists.
- **Which columns do I need to complete?**
There are a few required and several optional descriptive fields to complete in each template. To successfully load data into ImmPort, only the required fields in the templates need to be filled out. However, in order to fully use ImmPort's research data search capabilities, we encourage you to provide as much information as possible.
- **How do I know which columns are required?**
In the spreadsheet templates, the required columns have a white background and the column name has a red asterisk. The column names have comments that can be seen by hovering the cursor over the column name.
- **What is a user defined ID?**
The user defined ID is intended to be a short name for a metadata record (e.g a subject or sample) and must be unique within the scope of a research project.
- **How do I link data elements together?**
The templates "talk" to each other via key linkages (for example, the Protocol IDs defined in protocols.xls will be referenced in bioSamples.xls when you indicate which protocol was used for a particular biological sample). It is important to make sure all of these key linkages match up when they are used.



Summary of links to and from the metadata transfer files

This table summarizes how data elements can be linked together.

Link To / Link from	Studies	Protocols	Reagents	Subjects	Biological Samples	Experiments	Experiment Samples	Results
Studies		Yes						
Protocols		-	-	-	-	-	-	-
Reagents		-	-	-	-	-	-	-
Subjects	Yes (Study Arm or Cohort)	Yes	-	-	-	-	-	-
Biological Samples	Yes	Yes	-	Yes	-	-	-	-
Experiments		Yes	-	-	-	-	-	-
Experiment Samples		Yes	Yes	-	Yes	Yes	-	Yes
Results		-	-	-	-	-	-	-



Spreadsheet Metadata Transfer File Features

- **Do not edit or delete the column headers.** The column headers are used to ensure that the data the user enters is properly processed.
- Non-shaded columns are **required fields** to be completed but the shaded columns are optional fields.
- Explanatory **comments** which include the type of information and the size of text to enter into a cell are available by moving the cursor (mouse) over the column header name. Commented column headers have a small red triangle in the upper right corner of the cell.
- **Drop down lists** for some columns (e.g. measurement technique in experiments.xls) are activated by clicking on a cell in the column (i.e. controlled vocabulary).
- When working on the Excel templates, we recommend that you save these templates in Microsoft Excel format until you are ready to upload a submission package. At that point, you will save all templates as tab-delimited text file files.
- In the spreadsheet templates, the following metadata categories use a **color code**:

Biological Samples:	blue
Experiments:	yellow
Experiment Samples:	purple
Protocols:	orange
Reagents:	light green
Subjects:	rose

When linking entries in one metadata transfer file to another file, the color coding of column headers can be used as a guide to indicate how to make the link.



Protocols

The **protocols.xls** template captures information on how the Biological Sample was isolated, enriched, processed, treated or otherwise prepared for experimental use reagents to generate experiment results.

The columns in this template are Protocol User-Defined ID, Protocol File Name, Protocol Type, and Protocol summary.

	A	B	C	D	E	F
1	Protocols	Version 2.9				
2	Please do not delete or edit this column					
3	Column Name	Protocol User-Defined ID*	Protocol File Name*	Protocol Name	Protocol Type	Protocol summary
4		FlowCyt Splenic B cell isolation	Splenic_B_cell_isolation.pdf	Splenic B cell isolation	Biomaterial_Transformation	Removal of spleen from mouse and isolating B cells
5		FlowCyt Culture conditions	Culture_conditions.pdf	Culture conditions	Biomaterial_Transformation	Culturing cells for extended periods
		FlowCyt Protocol	FlowCytometryProtocol.xls	Flow Cytometry Protocol	Assay	Preparation of cells for flow cytometry, including staining with fluorochrome-conjugated antibodies

This User-defined ID is similar to the one entered in subjects, bioSamples and experimentSample templates

Enter name of protocol

File name MUST be **EXACTLY the same as protocol document** included in submission package including extension

Select protocol type from the drop down list

Enter protocol summary

Reagents

The **reagents.xls** template captures chemical compounds used to measure an Analyte(s). Different unique files of reagents worksheets can be selected for Array, ELISA, ELISPOT, FCM, HLA, Illumina and Other. The example given is a completed reagents version of ELISPOT. Please refer to the Data Submission user guide for detailed information.

Whenever there is a comma in a text in any cell, Microsoft Excel will add a double quote at the beginning of the text and a double quote at the end of the text.

	A	B	C	D	E	F	G	H	I	J	K
1	Reagents	Version 2.7									
2	Please do not delete or edit this column										
3	Column Name	Flow Cytometry Reagent User-Defined ID*	Analyte Name*	Detector Name*	Reporter Name*	Is this a Reagent Set?*	Reagent Set Components- Reagent User-Defined IDs*	Reagent Set Components- ImmPort Reagent Accessions*	Manufacturer*	Catalog Number*	Reagent Name
4		FlowCyt Annexin V FITC	Phosphatidyl	Annexin V	FITC	N			BD Pharmingen	556419	Annexin V
5		FlowCyt anti CD24 PE	CD24	anti-CD24 ar PE		N			BD Pharmingen	553262	anti-CD24 antibody
6		FlowCyt anti IgD bio SA PerCP	IgD	anti-IgD antik PerCP		N			BD Pharmingen	553509, 554064	anti-IgD antibody
7		FlowCyt anti AA4.1 APC	AA4.1	anti-AA4.1 s APC		N			e-bioscience	17-5892-81	anti-AA4.1 antibody
8		FlowCyt anti CD23 PE Cy7	CD23	anti-CD23 ar PE-Cy7		N			e-bioscience	25-0232-82	anti-CD23 antibody
9		FlowCyt anti CD23 PE CP	CD19	anti-CD19 ar PerCP		N			BD Pharmingen	557655	anti-CD19 antibody
10		FlowCyt anti CD21 Pac blue	CD21	anti-CD21 ar Pacific blue		N			e-bioscience	57-0212-82	anti-CD21 antibody
11											

This User-defined ID is referenced in the experimentSample template defining samples used (templates are assay specific)

Indicate measured analyte

If reagent is a set, provide set components

Manufacturer

Catalog Number

Subjects

Two templates for human (**subjectsHuman.xls**) and non-human primate subjects(**subjectsAnimal.xls**) are available to collect Subjects information. These templates are available from **Step 1 of Data Submission**. Only one subjects.xml file is available for both of these templates.

Note: Subjects MUST link to a Protocol(s). This is a requirement on DAIT minimum information standards.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	Subjects	2.13													
2	Please do not delete														
3	Column Name	Subject User-Defined ID*	Subject Treatment Protocol User-Defined ID*	Gender*	Age*	Age Unit*	Age Event*	Age Event Specify	Ethnicity*	Race*	Race Specify	Subject Phenotype*	Study Arm Or Cohort*	Subject Description	Population
4															

Reference the Subject User-ID in the bioSamples template

Enter Protocol-User ID

Gender can Gender male, female or unknown

Select age unit

Select the event used to calculate age

Link the subject to a study's arm or cohort



Biosamples

The **biosamples.xls** template captures biological material that has undergone isolation, processing and/or treatment prior to use in an experiment. The template is available from **Step 1: Submit Data**. Description on template may include links or references to a subject, protocols or a source biological sample.

bioSamples.xml is used to capture in a systematic way the metadata describing the biological samples used in an experiment. **Attention:** When an element uses a controlled vocabulary, the values are case sensitive and **MUST** be entered as specified.

Note: Biological Samples MUST link to a Protocol(s) and Subjects.

A	B	C	D	E	F	G	H	I	J	K	L
Biological Samples	Version 2.13										
Please do not delete or edit this column											
Column Name	Biological Sample User-Defined ID*	Biological Sample Type*	Biological Sample Protocol User-Defined ID*	Source Subject User-Defined ID*	Study User-Defined ID*	Study Time Collected*	Study Time Collected Unit*	Study Time T0 Event*	Study Time T0 Event Specify	Biological Sample Name	Biological Sample Description

Select the Biological Sample type from the drop-down menu

Protocol User_Defined ID is a required field

Link the sample to a study

Describe the sample's collection within the study.

A red triangle indicates there are additional instructions upon mousing over

The same biological sample User-defined ID is referenced in the experimentSample template

Subject User-defined ID which Biological user-defined ID is derived



Experiments

The **experiments.xls** template captures the overall goal and methods of an experiment. The column "Experiment User-Defined ID" refers to the short name for the experiment. The "Experiment Name" column records a longer name. More detail can be provided about experiments, but that is the minimum data the user will need in filling out the template.

Note: Experiments MUST link to a Protocol(s). This is a requirement on DAIT minimum information standards.

	A	B	C	D	E	F	G	H	I	J	K
1	Experiments	Version 2.9.2									
2	Please do not delete or edit this column										
3	Column Name	Experiment User-Defined ID*	Experiment Type*	Measurement technique*	Protocol User-Defined ID*	Experiment Name	Description	Hypothesis	Rationale	Keywords	Quality Control Measures
4		FlowCyt Expt	Cellular_Phenotype	FCM	FlowCyt Splenic B cell isolation; FlowCyt Culture conditions; FlowCyt Protocol	Annexin+6 colo	Comparison of	BAFF has d	Based on	BAFF, spli	Normal flow
5											
6											

Title of the template: DO NOT EDIT it

DO NOT EDIT column A

Experiment Type is selected from the drop-down menu list

Links to protocols.xls

Enter a Name for the experiment

Enter a description of the experiment here

The measurement technique depends on type of experiment selected from drop-down list

Additional comments and user instructions for each column are described when you mouse over the column name

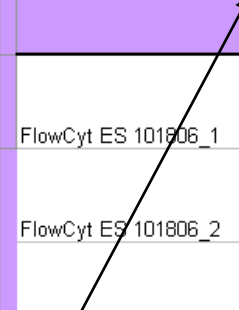
The Experiment User-defined ID will be referenced in the experimentSamples.xls template to link together all experiment samples for an experiment. Each unique experiment should be entered in its own row



Experiment Samples

The experiment samples templates are organized by assay type. If there are commonly used file formats for an assay type (e.g. Affymetrix gene expression arrays or Illumina genotyping arrays), there is often an experiment sample template for the assay type and file format. The experiment sample templates all capture the links between experiments, protocols, biological samples, and assay results.

When linking an experiment sample to more than one reagent, sample, protocol or result file, please use a semi-colon (;) to separate the records.

Experiment Samples		Version 2.9.2					Optional	Optional	Optional	Optional
Experiment Sample User-Defined ID*	Experiment User-Defined ID*	Protocol User-Defined ID*	Reagent User-Defined ID*	Biological Sample User-Defined ID*	FCS Result File*	Marker Information File	Additional Result File Names	Experiment Sample Name	Experiment Sample Description	
	FlowCyt ES 101806_1	FlowCyt Expt	FlowCyt Splenic B cell isolation	FlowCyt Annexin V Splenic_B-cells_untreated	Specimen_001_Tube_001.fcs		Bcell_stain.info	Specimen001_tube1		
	FlowCyt ES 101806_2	FlowCyt Expt	FlowCyt Splenic B cell isolation	FlowCyt Annexin V Splenic_B-cells_untreated	Specimen_001_Tube_002.fcs		Bcell_stain.info	Specimen001_tube2		
	FlowCyt ES 101806_3	FlowCyt Expt	FlowCyt Splenic B cell isolation	FlowCyt Annexin V Splenic_B-cells_untreated	Specimen_001_Tube_003.fcs		Bcell_stain.info	Specimen001_tube3		

Choose an experiment platform

Enter the Experiment User Defined ID after selecting the appropriate tab for GT, GE, FCM or other ExpSample

Enter the Experiment User-defined ID that the Experiment Sample is associated with

Enter the Protocol User-defined ID

Enter a Name for each Experiment Sample

Enter the User-defined ID of the Reagent associated with the Experiment Sample

This column links to bioSamples.xls

Enter raw (primary) results file name including extension of experiment sample



Experiment Samples templates are specific for the assay types below and reflect individual characteristics unique to each:

- **ELISA**
- **ELISPOT**
- **Flow Cytometry**
- **Gene Expression**
- **Genotyping**
- **HLA**
- **KIR**
- **Mass Spectrometry**
- **MBAA**
- **qRT-PCR**
- **Hemagglutination Inhibition**
- **Virus Neutralization**

For assistance with template completion, please contact the helpdesk at helpdesk@import.org



Comparison of Templates

If the metadata files completed were stacked on top of each other, a new perspective on how each is related can be observed. The color coding of the metadata categories and how they are represented in different files can be seen.

subjectHuman.xls

Subjects	Version 2.13												
Please do not delete or edit this column													
Column Name	Subject User-Defined ID*	Subject Treatment Protocol User-Defined ID*	Gender*	Age*	Age Unit*	Age Event*	Age Event Specify	Ethnicity*	Race*	Race Specify	Subject Phenotype*	Study Arm Or Cohort*	

bioSamples.xls

Biological Samples	Version 2.13												
Please do not delete or edit this column													
Column Name	Biological Sample User-Defined ID*	Biological Sample Type*	Biological Sample Protocol User-Defined ID*	Source Subject User-Defined ID*	Study User-Defined ID*	Study Time Collected*	Study Time Collected Unit*	Study Time T0 Event*	Study Time T0 Event Specify	Biological Sample Name	Biological Sample Description	Biological Sample Accession	

experiments.xls

Experiments	Version 2.9.2												
Please do not delete or edit this column													
Column Name	Experiment User-Defined ID*	Experiment Type*	Measurement technique*	Protocol User-Defined ID*	Experiment Name	Description	Hypothesis	Rationale	Keywords	Quality Control Measures			

experimentSamples.xls

Experiment Samples	Version 2.9.2							Optional	Optional	Optional	Optional		
Please do not delete or edit this column													
Column Name	Experiment Sample User-Defined ID*	Experiment User-Defined ID*	Protocol User-Defined ID*	Reagent User-Defined ID*	Biological Sample User-Defined ID*	.FCS Result File*	Marker Information File	Additional Result File Names	Experiment Sample Name	Experiment Sample Description			

protocols.xls

Protocols	Version 2.9												
Please do not delete or edit this column													
Column Name	Protocol User-Defined ID*	Protocol File Name*	Protocol Name	Protocol Type	Protocol summary								

reagents.xls

Reagents	Version 2.7												
Please do not delete or edit this column													
Column Name	Flow Cytometry Reagent User-Defined ID*	Analyte Name*	Detector Name*	Reporter Name*	Is this a Reagent Set?*	Reagent Set Components-Reagent User-Defined IDs*	Reagent Set Components-ImmPort Reagent Accessions*	Manufacturer*	Catalog Number*				



Derived Data

1. Flow Cytometry Derived Data Report

The **FCM_derived_data.xls** template is available from **Step 1 of Data Submission**. Flow Cytometry Derived data refers to the measurement of the Experiment Sample to which the population cell number, population percentage or other statistics apply

	A	B	C	D	E	F	G	H	I	J	K
1	FCM analyzed results	Version 2.3									
2	Please do not delete or edit this column										
3	Column Name	Experiment Sample User-Defined ID ¹	Experiment Sample ImmPort Accession ¹	Population Description ¹	Population Definition (gating combination) ¹	Population Cell Number (please include unit) ¹	Base/Parent Population for Population Percentage ¹	Population Percentage (%)	Other Population Statistic(s)	Parameter Statistic(s)	Comments
4		101806_1		B-cells	Viable gate	911066 cells/sa	all events	72.80%			
5		101806_1		Annexin neg	Annexin negative	325251 cells/sa	B-cells	35.70%			
6		101806_1		AA4hi Imma	AA4hi	45210 cells/sa	B-cells and Annex	13.90%			

Enter the Population %

Enter the parameter statistics using the specified format

Enter the experiment Sample User-defined ID or Accession

Enter a description of the population defined by the gate(s)

Provide the gates used to define the population

Provide the number of cells/unit in the population

Specify the base or parent population, or indicate that it is "Total events"

Other population statistics and comments may be provided



Example templates needed in Flow Cytometry data submission

Experiments.xls template (1 of 2)

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1	Experiments	Version 2.3														
2	Please do not delete or edit this column															
3	Column Name	Experiment User-Defined ID ¹	Experiment Type ¹	Measurement technique ¹	Protocol User-Defined ID ¹	Protocol ImmPort Accession ¹	Experiment Name	Description	Hypothesis	Rationale	Keywords	Quality Control Measures	Experimenters	Links to Publications	Constants	Condition Variables
4		Experiment 10/1	Cellular_Phenotype	FCM	FlowCytometryProtocol		Annexin+B	Comparison	BAFF has d	Based on :BAFF, spleen, B cells	Eva Sadat				Cell type	Cultured

The Experiment User-defined ID¹ will be referenced in the experimentSamples.xls template to link together all experiment samples for an experiment

Enter Experiment type used

Enter the Protocol User-Defined ID

Enter Measurement Technique

Enter a Name for the experiment

Enter a description of the experiment here

Enter a Hypothesis, Rationale, Keywords, Quality control measures, Links to publications, Constants, Conditional variables



Example templates needed in Flow Cytometry data submission

Experiments.xls template (2 of 2)

	I	J	K	L	M	N	O	P
1								
2								
3	Hypothesis	Rationale	Keywords	Quality Control Measures	Experimenters	Links to Publications	Constants	Conditional Variables
4	T cell development is impaired in CPD knockout mice	Based on thymic atrophy and perturbations in other lymphoid cell populations, we expect that T cell development is also perturbed in CDP knockout mice	CPD, thymus, T cell		Jamie Lee	PMID: 11739170	Cell type	mouse genotype (WT versus CDP homozygous knockout)
5								

Enter experiment keywords here

Indicate who performed the experiment here

Indicate any links to publications here, such as a PMID number or a URL

Enter the experiment rationale here

Indicate what quality control measures were used here (e.g. duplicates, triplicates)

List the Constants and Conditional Variables in the experiment. In this example, thymocytes from a WT and mutant mouse are compared. Since only one cell type is used in the experiment, "Cell Type" is a Constant. The mouse genotype is the Conditional Variable in this experiment



Derived Data, continued

HLA Typing Summary Report

The **HLA_Typing.xls** template is available at **Step 1 of Data Submission**. Data is used to analyze HLA using controlled vocabulary unique to groups of populations using measurements of gene types like HLA-A, HLA-B, DPA1, DPB1, DQA1, DQB1, DRB1etc. The loci names are available from the IMGT website (www.ebi.ac.uk/imgt/hla/) or the dbMHC (www.ncbi.nlm.nih.gov/mhc/) website. A horizontal format for collecting typing results is recommended.

Two columns must share a locus name with one column name ending in 'Allele 1' and the other column name ending in 'Allele 2'.

Note: Currently no validation of locus names is done.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	Z
1	HLA Typing Results Please do not delete or edit this column	Version 2.7																
2	Column Name	Experiment Sample User-Defined ID*	HLA-A Allele 1	HLA-A Allele 2	HLA-B Allele 1	HLA-B Allele 2	HLA-C Allele 1	HLA-C Allele 2	HLA-DPA1 Allele 1	HLA-DPA1 Allele 2	HLA-DPB1 Allele 1	HLA-DPB1 Allele 2	HLA-DRB5 Allele 1	HLA-DRB5 Allele 2	Other	Other		
3																		
4		HLA Typing Report 1	A*0101	A*0101	B*07021	B*07022												
5		HLA Typing Report 2	264	264	B*07022	B*07023												
6																		
7																		
8																		

Enter the Experiment Sample User-defined ID here

Any two columns must share the same locus name

Other loci from dbMHC are canonical and can be selected



Save the spreadsheet file as tab-delimited text

Each template **must be saved in a tab-delimited text file (*.txt)** format in preparation for submission to ImmPort. Click on "File" in the Excel menu bar and choose "Save As". In the pop up window, click on the "Save as type" drop-down list, scroll down and choose "Text (tab-delimited) (*.txt)". When the pop window appears asking if the user wants to save the files as text, please select "Yes".

Note: The original names of the templates (e.g. protocols.txt) MUST be maintained.

Only one copy of each of the metadata files is included in a data submission package.

Choose "Save As"...

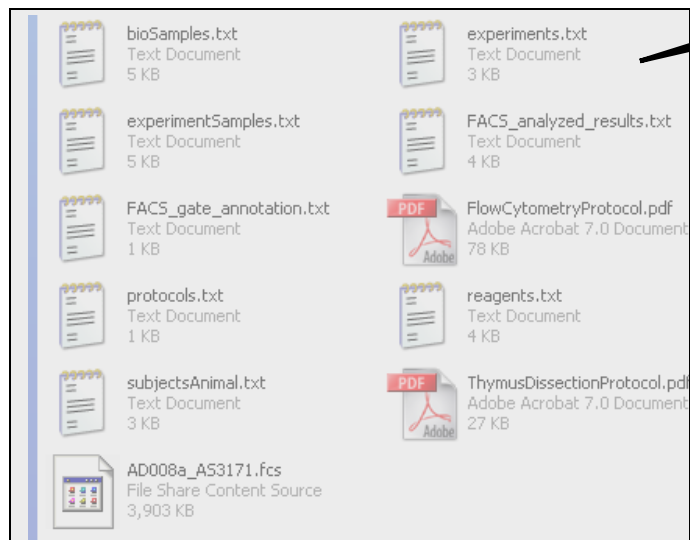
...which opens this "dialog box". From "Save as type, choose "Text (Tab Delimited)".

Choose "Yes"

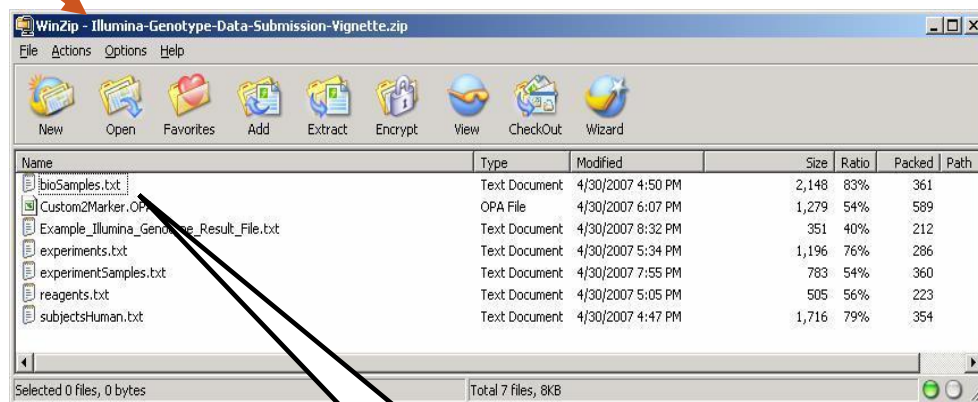
Clicking "Save" opens another dialog box.

Data Submission Package .zip file contents and structure

The ImmPort data submission package is a .zip file that includes all of the files the user wants to submit. There are many tools that can be used to create a ".zip" archive file. Select all of the files to be included and then create a .zip file (versus .zipping a folder with all of the files). Please do not select a folder or directory of files to ZIP- this confuses ImmPort's software.



Select all files to include in .zip



Review .zip file contents



Data Submission / Data Submission Package Validator

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[Submit Data](#)
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[Download and Fill Templates](#)



[Step 2:](#)
[Check Data in .zip file](#)



[Step 3:](#)
[Send Data in .zip file](#)



[Step 4:](#)
[Review Submission Status
& Results](#)

Data Submission Package Validator

This tool checks the format and content of the files in a data package and reports issues. This tool is downloaded to your computer and run from a graphical user interface.

The Validator inspects completed templates (the metadata transfer files) for common formatting error and data integrity issues, checks for missing files, improperly formatted metadata files and references to other metadata within the data package, Integrity and structure of .zip files.

It is highly recommended to use the Validator before sending data into ImmPort as part of the data submission process.

When no issues are noted by the Validator, please submit the data submission .zip package to ImmPort.

The following requirements are important for the running the application:

- **Java configured to run from the Windows command prompt.**
- **JRE 1.5.X or later installed.**
- **Minimum size of memory required is 64 MB.**
- **Number of files to be unzipped is 76 files and 42 folders.**
- **Disc space needed is 8.33 MB.**
- **No file overwriting will occur by default.**

Uploading a file less than or equal to 1 Gigabyte -- Submit Online

Click on the send data file tab and if the page has timed out, log back into ImmPort and continue with the submission process. Select the **research project** to which the data will be submitted. If none has been created, the Principal Investigator or the Project Manager can create one. If there are multiple projects listed, the Principal Investigator or the Project Manager decides which project to select.



Research data will be stored in the private project workspace of your research project. Please select the Research Project and Grant/Contract number with which your data will be associated and enter any comments in the Notes text box. If you need assistance in understanding what a Research Project is and whether you are associated with one, please contact the Help Desk.

ImmPort accepts data submission packages in the "ZIP" format. (Please see the Data Submission User Guide for more information on how to create a .zip file.)

Please **DO NOT** include spaces in the .zip file name.

If your .zip file is less than or equal to 1 Gigabyte, please use the Submit on-line option.

- ▶ Check the "Upload Online" check box.
- ▶ Select the .zip file using the browse button.
- ▶ Click submit and

If your .zip file is greater than 1 Gigabyte, please use the Submit via FTP option.

- ▶ Uncheck the "Upload Online" check box.
- ▶ Click submit and
- ▶ Contact the help desk for assistance.

If this is your first time submitting data to ImmPort, please contact the Help Desk for assistance.

- ▶ A set of protocol
- ▶ Reagent list
- ▶ A list of types of
- ▶ A system for uni

Please check that you are using the [latest version](#) of the ImmPort data transfer templates.

Research Project Title: TESTING: Bioinformatics Integration Support Project

Contract/Grant Number: HH5N2662004000765

Notes:

☒ Upload Online

Browse...

Submit

Indicate any relevant notes pertinent to the uploaded data and ensure the Upload Online is checked

Browse for the file to upload from the local directory on your computer and then click 'Submit'



Uploading a file greater than 1 Gigabyte -- Submit Offline

To upload data files greater than 1 Gigabyte uncheck the upload button and click submit. The Upload ticket is used to track the package for

Data Submission / Experiment Data Submission

[Submit Data](#) | [Submission History](#) | [Resources](#) ▾



Research data will be stored in the private project workspace of your research project. Please select the Research Project and Grant/Contract number with which your data will be associated and enter any comments in the Notes text box. If you need assistance in understanding what a Research Project is and whether you are associated with one, please contact the Help Desk.

ImmPort accepts data submission packages in the "ZIP" format. (Please see the Data Submission User Guide for more information on how to create a .zip file.)

Please DO NOT include spaces in the .zip file name.

Please check that you are using the [latest version](#) of the ImmPort data transfer templates.

Research Project Title:

Notes:

Upload Online to be **unchecked**

☐ Upload Online

TESTING: Bioinformatics Integration Support Project

Add relevant notes pertinent to the project or data being uploaded

Click to get the upload ticket number that can be used to 'track' the package uploaded into ImmPort.

Submit



Review Data Submissions History

When the .zip file has been sent to ImmPort, the web page will be redirected to the Data Submission History page that lists the data packages that have been sent.

An email confirmation is sent to the submitter that the data package has completed submission processing or that there have been some problems with the package.



Data Submission / Data Submission History

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[Submit Data
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[Step 1:
Download and Fill Templates](#)



[Step 2:
Check Data in .zip file](#)



[Step 3:
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[Step 4:
Review Submission Status
& Results](#)

This page is a summary overview of the data submissions to a project. If you have access to more than one project, use the project filter to view the submission queue from other projects.

The data submitted to ImmPort can be queried and reviewed in [Research Data Search](#)

Filter By Project

ADVn Varicella test



Set Filter

Click on a Ticket Number below to view a submission's details.

15 items found, displaying all items.

Ticket Number	.ZIP File Name	Format	Status	Submitter	Submit Date
kilelbe_20091013_194	ELISA_example_Package.tab-delimited.zip	ELISA-MBAA_repo rt_file	Completed	kilelbe	10/13/2009 09:21:11
kilelbe_20091013_195	ELISPOT_example_Package.tab-delimited.zip	ELISPOT_report_file	Completed	kilelbe	10/13/2009 09:21:15
kilelbe_20091013_196	Flow_Cytometry_example_Package.tab-delimited.zip	FCM_report_file	Completed	kilelbe	10/13/2009 09:21:22
kilelbe_20091013_197	Gene_Expression_Example_Package.tab-delimited.zip	GEO_GSM_GCOS-MA S5_output	Started	kilelbe	10/13/2009 09:21:28

The status of the submitted data is indicated as either 'Pending' or 'Completed'. The nature of the error is indicated on the Ticket Number for debugging



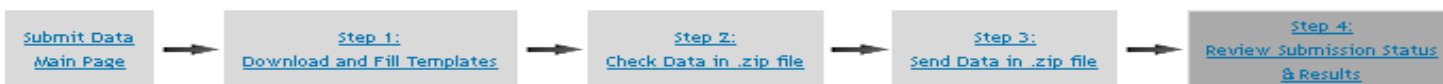
Review Data Submissions History

When the .zip file has been sent to ImmPort, the web page will be redirected to the Data Submission History page that lists the data packages that have been sent.

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Data Submission / Data Submission History

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This page is a summary overview of the data submissions to a project. If you have access to more than one project, use the project filter to view the submission queue from other projects.

The data submitted to ImmPort can be queried and reviewed in [Research Data Search](#)

Filter By Project

Regression July 20 ▾

Set Filter

Click on a Ticket Number below to view a submission's details.

5 items found, displaying all items.

Ticket Number	.ZIP File Name	Format	Status	Submitter	Submit Date
Bea1_20091021_222	ELISA_Example_Package.XML.zip	ELISA_report_file	Completed	Bea1	10/21/2009 14:24:42
Bea1_20091021_217	ELISA_example_Package.tab-delimited.zip	ELISA-MBAA_report_file	Completed	Bea1	10/21/2009 13:58:59
Bea1_20090902_143	extractXML#2.zip	Affy_GCOS-GDAS- GTYPE_Genotyping_output	Completed	Bea1	09/02/2009 16:09:00
Bea1_20090720_41	HLA_1reagentperlocus_Example_Package.tab- delimited.zip	HLA_typing_summary	Completed	Bea1	07/20/2009 15:03:56
Bea1_20090720_40	Gene_Expression_Example_Package.tab- delimited.zip	GEO_GSM_GCOS-MA SS_output	Completed	Bea1	07/20/2009 13:47:15

5 items found, displaying all items.

Legend:

- * Pending, The .zip file is in the data submission processing queue.
- * Started, The .zip file is being validated.
- * Completed, The .zip file is successfully processed and stored.
- * Rejected, One or more errors were encountered when processing the submitted files.

The status of the submitted data is indicated as either 'Pending' or 'Completed'. The nature of the error is indicated on the Ticket Number for debugging